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II. CLAIM AMENDMENTS

1. (Currently Amended) A cavity, continuously tunable ~~in~~ over a wavelength range, comprising:

a first reflecting unit ~~adapted~~configured to at least partially reflect an incident beam of electromagnetic radiation towards a second reflecting unit,

said second reflecting unit ~~adapted~~configured to at least partially reflect an incident beam of electromagnetic radiation back towards said first reflecting unit, both reflecting units providing the formation of resonance modes of said electromagnetic radiation within said cavity, wherein an optical path of said beam within said cavity is defined in length by said first and second reflecting units,

a grating, which is arranged within said optical path of said beam being reflected by said first reflecting unit, said grating ~~being adapted~~configured for tuning the wavelength of said beam,

wherein said second reflecting unit is ~~arranged being rotatable~~configured to rotate about an axis by at least 360 degrees ~~for providing~~and provides a continuous movement of said second reflecting unit along a circle path with respect to said grating to continuously vary the optical path length of the cavity,

said circle path of said second reflecting unit comprising at least a portion being arranged to intersect with said beam, which is redirected by said grating.

2. (Previously Presented) A cavity according to claim 1, further comprising a laser source, which comprises

a gain medium emitting said beam of electromagnetic radiation through a front surface along said optical path towards said grating, and

said first reflecting unit as a back facet.

3. (Previously Presented) A cavity according to claim 1,

wherein said first and second reflecting units and said grating are arranged as a Littmann-cavity comprising a pivot point, said pivot point having a position substantially within said axis of rotation of said second reflecting unit.

4. (Previously Presented) A cavity according to claim 1, wherein said axis of rotation of said second reflecting unit is arranged being substantially orthogonal to a plane defined by said first and second reflecting unit and said grating.

5. (Currently Amended) A cavity, continuously tunable ~~in~~ over a wavelength range, comprising:

a first reflecting unit ~~adapted~~configured to at least partially reflect an incident beam of electromagnetic radiation towards a second reflecting unit,

the said second reflecting unit ~~adapted~~configured to at least partially reflect an incident beam of electromagnetic radiation towards said first reflecting unit, both reflecting units providing the formation of resonance modes of said electromagnetic radiation within said cavity, wherein an optical path of said beam within said cavity is defined in length by said first and second reflecting units,

at least one grating ~~adapted~~configured to redirect said optical path of said beam being reflected by said first reflecting unit towards said second reflecting unit, ~~being adapted for tuning~~and configured to tune the wavelength of said beam,

wherein said at least one grating is ~~arranged being rotatable~~configured to rotate along a circle path about an axis by at least 360 degrees ~~for providing~~and provides a continuous movement with respect to said first and second reflecting unit to continuously vary the optical path length of the cavity,

said circle path of said at least one grating comprising at least a portion being arranged to intersect with said beam, which is reflected by said first reflecting unit.

6. (Previously Presented) A cavity according to claim 5, further comprising a laser source, which comprises

a gain medium emitting said beam of electromagnetic radiation through a front surface along said optical path towards said grating, and

said first reflecting unit as a back facet.

7. (Previously Presented) A cavity according to claim 5, comprising a first and at least one second grating, both gratings being rotatable about the same axis by at least 360 degrees, the first grating having a first grating constant and the second grating having a second grating constant, which is different from said first grating constant, both gratings adapted to redirect said beam being reflected by said first reflecting unit towards said second reflecting unit.

8. (Previously Presented) A cavity according to claim 5, comprising a multiple of gratings each being mounted to a rotatable support, and each of said gratings comprising:

the same axis of rotation, and

the same circle path comprising the same portion being arranged to intersect with said beam, which is reflected by said first reflecting unit.

9. (Currently Amended) A cavity, continuously tunable ~~in~~over a wavelength range, comprising:

a first reflecting unit ~~adapted~~configured to at least partially reflect an incident beam of electromagnetic radiation towards a second reflecting unit,

the second reflecting unit ~~adapted~~configured to at least partially reflect an incident beam of electromagnetic radiation towards said first reflecting unit, both reflecting units providing the formation of resonance modes of said electromagnetic radiation within said cavity, wherein an optical path of said beam within said cavity is defined in length by said first and second reflecting unit,

a grating ~~adapted~~configured to redirect said optical path of said beam being reflected by said first reflecting unit towards said second reflecting unit, ~~said grating being adapted for tuning~~and configured to tune the wavelength of said beam by means of diffraction,

a redirection reflecting unit adapted to redirect said optical path of said beam, which is redirected from said grating towards said second reflecting unit,

wherein said redirection reflecting unit is ~~arranged being rotatable~~configured to rotate along a circle path about an axis by at least 360 degrees for providing a continuous movement with respect to said grating and said second reflecting unit to continuously tune the cavity over a wavelength range by ~~vary~~varying the optical path length of the cavity,

said circle path of said redirection reflecting unit comprising at least a portion being arranged to intersect with said beam, which is redirected by said grating.

10. (Currently Amended) A cavity, continuously tunable ~~in~~over a wavelength range, comprising:

a first reflecting unit ~~adapted~~configured to at least partially reflect an incident beam of electromagnetic radiation towards at least one second reflecting unit,

said second reflecting unit ~~adapted~~configured to at least partially reflect an incident beam of electromagnetic radiation towards said first reflecting unit, both reflecting units providing the formation of resonance modes of said electromagnetic radiation within said cavity, wherein an optical path of said beam within said cavity is defined in length by said first and second reflecting units,

a grating, which is arranged within said optical path of said beam being reflected by said first reflecting unit, said grating ~~being adapted~~configured for tuning the wavelength of said beam,

wherein said second reflecting unit and said grating are both ~~arranged being rotatable~~configured to rotate along a circle path about an axis by at least 360 degrees ~~for providing~~and provide a continuous movement with respect to said grating to continuously vary the optical path length of the cavity,

said circle path of said grating comprising at least a portion being arranged to intersect with said beam, which is reflected by said first reflecting unit.

11. (Previously Presented) A cavity according to claim 10, further comprising a laser source, which comprises:

a gain medium emitting said beam of electromagnetic radiation through a front surface along said optical path towards said grating, and

said first reflecting unit as a back facet.

12. (Currently Amended) A method of continuously tuning a cavity over a wavelength range, comprising:

at least partially reflecting an incident beam of electromagnetic radiation from a first reflecting unit towards a second reflecting unit,

at least partially reflecting an incident beam of electromagnetic radiation from said at least one second reflecting unit back towards said first reflecting unit, both reflecting units providing the formation of resonance modes of said electromagnetic radiation within said cavity, wherein an optical path of said beam within said cavity is defined in length by said first and second reflecting units,

tuning the wavelength of said beam by using a grating, which is arranged within said optical path of said beam being reflected by said first reflecting unit,

rotating said at least one second reflecting unit about an axis by at least 360 degrees for providing a continuous movement of said second reflecting unit along a circle path with respect to said grating for continuously varying the optical path length of the cavity, said circle path of said second reflecting unit comprising at least a portion being arranged to intersect with said beam, which is redirected by said grating.

13. (Currently Amended) A cavity, continuously tunable ~~in~~over a wavelength range, comprising:

a first reflecting unit ~~adapted~~configured to at least partially reflect an incident beam of electromagnetic radiation towards a second reflecting unit, wherein said second reflecting unit is ~~adapted~~configured to at least partially reflect the incident beam of electromagnetic radiation back towards said first reflecting unit, both reflecting units providing the formation of resonance modes of said electromagnetic radiation within said cavity, and an optical path of said beam within said cavity is defined in length by said first and second reflecting units,

a grating arranged within said optical path and ~~being adapted~~configured for tuning the wavelength of said beam,

wherein at least one element of a group comprising the first reflecting unit, the second reflecting unit, and the grating is ~~arranged being rotatable~~configured to rotate about an axis by at least 360 degrees ~~for providing~~and provide a continuous movement of said element along a circle path with respect to at least one of the other elements to continuously vary the optical path length of the cavity, and

wherein said circle path comprises at least a portion being arranged to intersect with said beam.

14. (Previously Presented) The cavity of claim 13, wherein at least one of the first and second reflecting units comprise a redirection reflecting unit adapted to redirect said optical path with respect to said reflecting unit, and

wherein said redirection reflecting unit is arranged being rotatable along the circle path.

15. (Previously Presented) The cavity of claim 13, wherein said first and second reflecting units and said grating are arranged as a Littmann-cavity comprising a pivot point, said pivot point having a position substantially within said axis of rotation of said second reflecting unit.

16. (Previously Presented) A cavity according to claim 1, wherein at least one of the reflecting units comprises at least one of: a mirror, a plan mirror, a cavity end mirror, a retro-reflecting unit.

17. (Currently Amended) A method comprising:

at least partially reflecting an incident beam of electromagnetic radiation in a cavity between a first and a second reflecting unit,

providing the formation of resonance modes of said electromagnetic radiation within said cavity, wherein an optical path of said beam within said cavity is defined in length by said first and second reflecting units,

arranging a grating within said optical path for tuning the wavelength of said beam,

rotating at least one element of a group comprising the first reflecting unit, the second reflecting unit, and the grating about an axis by at least 360 degrees for providing a continuous movement of said element along a circle path with respect to at least one of the other elements to continuously tune the cavity over a wavelength range by

~~vary~~varying the optical path length of the cavity, wherein said circle path comprises at least a portion being arranged to intersect with said beam.